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## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 04/05/2004

William Nitkin  
850 Boylston Street, Suite 424  
Chestnut Hill, MA 02467

EXAMINER

ANTHONY, JOSEPH DAVID

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 04/05/2004

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/802,308      | 03/08/2001  | William C. Reed      | 112633              | 3151             |

TITLE OF INVENTION: HEAT-ABSORBING GEL MATERIAL

| APPLN. TYPE    | SMALL ENTITY | ISSUE FEE | PUBLICATION FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|--------------|-----------|-----------------|------------------|------------|
| nonprovisional | YES          | \$665     | \$0             | \$665            | 07/06/2004 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

Applicant claims SMALL ENTITY status. \_\_\_\_\_  
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

**Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
(703) 746-4000**

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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590 04/05/2004

William Nitkin  
850 Boylston Street, Suite 424  
Chestnut Hill, MA 02467

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**  
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

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| EXAMINER              | ART UNIT | CLASS-SUBCLASS |
|-----------------------|----------|----------------|
| ANTHONY, JOSEPH DAVID | 1714     | 252-008050     |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent):  individual  corporation or other private group entity  government

4a. The following fee(s) are enclosed:

4b. Payment of Fee(s):

Issue Fee  
 Publication Fee  
 Advance Order - # of Copies \_\_\_\_\_

A check in the amount of the fee(s) is enclosed.  
 Payment by credit card. Form PTO-2038 is attached.  
 The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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TRANSMIT THIS FORM WITH FEE(S)



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| 7590  | 04/05/2004  |                      | EXAMINER              |                  |
| William Nitkin<br>850 Boylston Street, Suite 424<br>Chestnut Hill, MA 02467 |             |                      | ANTHONY, JOSEPH DAVID |                  |
|   |             |                      | ART UNIT              | PAPER NUMBER     |
|   |             |                      | 1714                  |                  |
| DATE MAILED: 04/05/2004   |             |                      |                       |                  |

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 450 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 450 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

**Notice of Allowability**

Application No.

09/802,308

Examiner

Joseph D. Anthony

Applicant(s)

REED, WILLIAM C.

Art Unit

1714

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to election filed 01/02/04.
2.  The allowed claim(s) is/are 1-9 [renumbered as 8,4-6,1-2,9,7,3].
3.  The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some\*    c)  None    of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
    1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.  
(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
    Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
    Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
    of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
    Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

Joseph D. Anthony  
Primary Examiner  
Art Unit: 1714

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William Nitkin on 04/01/04.

The application has been amended as follows:

In claim 3, lines 4-6, ~~fire~~, delete "fire; and quickening the formation of said gel by its mixture with said carbon dioxide." and insert therefor –fire--.

Claims 10-11 have been canceled.

2. The following is an examiner's statement of reasons for allowance: The closest pieces of prior-art are deemed to be as followed:

- 1) Reed U.S. Patent Number 5,415,900 teaches a method of delivering a substance into a material mass comprising the steps of:
  - a) subjecting a first fluid to a magnetic influence for polarizing said first fluid to a first charge and affecting the organization of the molecules of said first material;

- b) Introducing said first fluid to a surface of said material mass for penetrating therein and absorbing of said first fluid within the interior of said material mass
- c) subjecting a second fluid to a second magnetic influence for polarizing said second fluid to a charge opposite that of said fluid first fluid and affecting the organization of the molecules of said second fluid
- d) introducing said second fluid to a surface of said material mass for penetrating therein and absorbing of said second fluid within the interior of said material mass, whereby said second fluid is attracted to said first fluid within the interior of said material mass, see abstract and claim 1.

Reed 5,415,900 patentable differs from applicant's claimed invention in the following ways: 1) there is no direct disclosure to any specific type of fluids, such as an aqueous solution of sodium silicate and an aqueous solution of sodium bicarbonate; and 2) there is absolutely no disclosure or suggestion of any kind to polarize an aqueous solution of sodium bicarbonate to a positive charge using a magnetic field, and then to mix it with an aqueous solution of sodium silicate that has been negatively charged using a magnetic field to form a gel.

2) Reed U.S. Patent Number 5,573,817 teaches a method of delivering a substance into a material mass comprising the steps of:

- a) measuring at least one quantity of at least one liquid material to be delivered
- b) applying a polarized magnetic field to said liquid material until fluid molecules of said liquid material are rearrange from a normal agglomerated state to a more linear and organized state, thereby increasing their permeability and effectiveness thereof,

c) introducing said magnetically influenced liquid material to said material mass for penetrating therein and direct substantial absorbing of said magnetically influenced liquid material by said material mass, see abstract and claim 1.

Reed 5,573,817 patentable differs from applicant's claimed invention in the following ways: 1) there is no direct disclosure to any specific type of fluids, such as an aqueous solution of sodium silicate and an aqueous solution of sodium bicarbonate; and 2) there is absolutely no disclosure or suggestion of any kind to polarize an aqueous solution of sodium bicarbonate to a positive charge using a magnetic field, and then to mix it with an aqueous solution of sodium silicate that has been negatively charged using a magnetic field to form a gel.

3) Reed U.S. Patent Number 5,804,068 teaches a fluid treatment device that can be used in the process of Reed U.S. Patents 5,415,900 and 5573817. Reed 5,804,068 patentable differs from applicant's claimed invention for the same reasons as the other said Reed Patents patentable differ.

4) Holcomb U.S. Patent Number 5,658,573 teaches that it is known in the art to prepare an aqueous solution of colloidal silica particles circulating the solution through a magnetic field so that the particles cut the field flux lines and build up a net negative charge thereon, see abstract.

Holcomb patentable differs from applicant's claimed invention in a number of ways the most significant being that there is absolutely no disclosure or suggestion of any kind to polarize an aqueous solution of sodium bicarbonate to a positive charge

using a magnetic field, and then to mix it with an aqueous solution of sodium silicate that has been negatively charged using a magnetic field to form a gel.

5) Franceschetti et al U.S. Patent Number 6,607,648 teaches that silica network particles are generated in water by a method in which an aqueous sodium silicate solution is subjected to vigorous agitation in air, followed by periods of circulation through magnetic fields of alternating directions and further periodic agitation exposed to the air, see the abstract.

Franceschetti et al patentable differs from applicant's claimed invention in a number of ways the most significant being that there is absolutely no disclosure or suggestion of any kind to polarize an aqueous solution of sodium bicarbonate to a positive charge using a magnetic field, and then to mix it with an aqueous solution of sodium silicate that has been negatively charged using a magnetic field to form a gel.

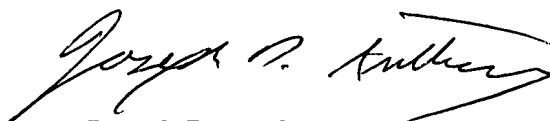
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

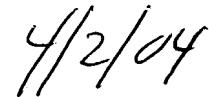
***Prior-Art Cited But Not Applied***

3. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

***Examiner Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. This examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 6:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

  
Joseph D. Anthony  
Primary Patent Examiner  
Art Unit 1714

  
4/2/04